

ABSTRACT OF THE DISCLOSURE

A liquid-crystal lens includes a hologram liquid-crystal element having a liquid crystal which provides a light beam transmitting therethrough with a phase change so as to have
5 a wavefront of a blaze-hologram shape; and a segment liquid-crystal element including a first electrode divided correspondingly to the blaze-hologram shape, a second electrode opposed to the first electrode and a liquid crystal for providing the transmitting light beam with a phase change by voltage
10 application to the first and second electrodes, the segment liquid-crystal element being arranged coaxial to the hologram liquid-crystal element.